



Environmental Consulting & Remediation Services

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September 17, 2012

Ms. Cheryl Sinclair, P.G.
Pennsylvania Department of Environmental Protection
Environmental Cleanup Program
208 West Third Street, Suite 101
Williamsport, PA 17701

RE: Response to USEPA PCB Soil Vapor Intrusion Results
Former Cerro Metal Products Bellefonte Facility – Plant 4 Area
PADEP Facility ID #14-17981
Permitted Facility ID #722133 and Remedial ID #39039

Dear Ms. Sinclair:

The approval of the Plant 4 Final Report required the potential for the soil vapor intrusion of polychlorinated biphenyls (PCBs) detected in the hydraulic oils remaining beneath the former brass melting furnace area of Plant 4 to be evaluated. The request was made by Mr. Grant Dufficy, Region 3, United States Environmental Protection Agency (USEPA). The presumptive remedy of source control, recovery and long-term monitoring of the hydraulic oils detected in the bedrock groundwater in the former furnace area has been implemented and there are no apparent adverse environmental risks remaining. The previously submitted and approved Statement of Work (SOW) for Evaluation of Soil Vapor Intrusion, PCBs at the Former Cerro Metal Products Company – Plant 4 Area has been completed and the results have been provided to the Pennsylvania Department of Environmental Protection (PADEP) and the USEPA in correspondence dated August 29, 2012. However, upon review of the results, the USEPA had three questions, two of which were issues with the results presented in Tables 1 and 2. The changes have been corrected and the tables are attached to this document for further review.

The third question was in regard to the results of the sample and its duplicate and the comparison of the results to the USEPA standards. The question was, *“For the indoor air, outdoor air and sub-slab sample locations where duplicate samples were collected, one air line from the pump was teed to supply air to both the original and duplicate PUF sorbent cartridges. The concentrations presented in Table 1 for Total PCBs (ug/m3) and Table 2 for individual congeners (ug/m3) appear to be based on dividing the total mass of the PCB (ug) detected divided by the total amount of air pumped (7.2 m3), rather than the*

amount of air pumped to each of the PUF cartridges. Please clarify how you calculated your air concentrations in these tables."

The USEPA is correct that each result from the Polyurethane Foam (PUF) was divided by the total amount of volume pumped (7.2 cubic meters (m³)).

The air/vapor and sub-slab samples were collected using USEPA Method TO-10A, which specifies a low-volume (1 to 5 liter per minute (L/minute)) sampler to be utilized to collect vapors on a sorbent cartridge containing PUF. The pumps used in the sampling process were calibrated to pump at 5.0 L/minute. This sampling flow rate resulted in the collection of 7.2 m³ of air/vapor over a 24-hour period (sampling period).

To ensure the accuracy of the duplicate sample, the PUF cartridges were set-up with one piece of tubing connected to the pump and a PVC "T". From the "T", two equal lengths of tubing were connected to the PUF cartridge. This facilitated no head loss from the vapor/air being pulled in at the pump. All pumps were calibrated by the rental company to withdraw air into the pump at 5.0 L/minute.

Even though the pumps were calibrated at 5.0 L/minute and the tubing was the same length from the "T" to the PUF cartridge, it can not be assumed that each PUF had an equal amount of air pass through it. To compensate for the unknown volume of air through the duplicate PUF cartridge, a new column was inserted into Tables 1 and 2 to present the total result of each sample and its duplicate. The total of the samples were then divided by the known volume of air that passed through them, which was the 7.2 m³. This result was then compared to the Regional Screening Level (RSL) Industrial Air Supporting (IAS) Table (USEPA, 2012).

The results from the air/vapor and sub-slab sampling event still did not indicate exceedances of the standards in the RSL IAS Table. Therefore, the requirement of the indoor air sampling requested by the USEPA has been met. It is our understanding that the PADEP should be able to grant approval of the Final Report for Plant 4 at the former Cerro Metal facility based upon these results.

Should you have any questions, or require further information, please feel free to contact me at 814-355-2241 or at mwhitman@letterleassociates.com.

Sincerely,



Matthew C. Whitman, CHMM
Project Manager



Steven J. Treschow, P.G.
Office / Senior Project Manager

Enclosure

cc: Mr. Ray Avendt, The Avendt Group, Inc.
Mr. Grant Dufficy, USEPA

Table 1
PCB Congener Results
Indoor Air, Ambient Outdoor Air, and Sub-Slab Vapor Samples
Plant 4 - Former Cerro Plant

Sample Name	Sample Location	Total PCBs (picograms)	Total Micrograms	Total Milligrams	Total Milligrams of Duplicates	Total Micrograms/ Cubic Meter	PCB 1	PCB 2	PCB 3	PCB 4	PCB 10	PCB 9	PCB 7	PCB 6	PCB 5	PCB 8	PCB 14	PBC 11	PCBs 12 + 13	PCB 15	PCB 19	PCBs 18 + 30	PCB 17	PCB 27	PCB 24	PCB 16	PCB 32	PCB 34	PCB 23	PCBs 26 + 29	PCB 25	PCB 31	PCBs 20 + 28	PCBs 21 + 33
Trap 1	SB-80U-D Indoor Air	936,000	0.9360	0.000936		0.130000	6,680	563	2,790	57,400	2,080	5,190	3,130	12,600	1,510	69,100	ND U	684 J	2,500	19,200	16,200 B	50,300 B	41,300 B	5,440	ND U	37,100 B	23,500 B	ND U	ND U	11,700	5,380	65,000 B	63,600 B	33,200 B
Trap 2	Outside	378,000	0.3780	0.000378	0.000542	0.075278	203 J	ND U	185 JK	2,400 J	ND U	ND U	ND U	671	ND U	3,030	ND U	422 JK	738	1,680 J	2,580 B	5,540 B	4,780 B	800 J	ND U	3,380 B	4,790 B	41.7 J	ND U	2,470	702 J	15,900 B	18,000 B	3,110 B
Trap 3	SB-79U-D Sub-slab	1,350,000	1.3500	0.001350	0.006370	0.884722	7,620	3,800	4,350	90,200	1,820	1,740	907	3,930	ND U	20,000	ND U	1,250	1,820	5,900	45,400 B	113,000 B	60,100 B	7,360	ND U	44,400 B	39,300 B	ND U	ND U	8,150	3,310	71,700 B	71,500 B	21,800 B
Trap 4	SB-80U-D Sub-slab	687,000	0.6870	0.000687		0.095417	27.1 J	ND U	ND U	946 J	ND U	ND U	ND U	ND U	487 JK	ND U	ND U	ND U	669 JK	4,430 B	3,960 B	4,250 B	1,430	ND U	2,470 B	6,840 B	ND U	ND U	1,570	1,190	9,700 B	19,400 B	3,900 B	
Trap 5	SB-79U-D - Indoor Air	809,000	0.8090	0.000809	0.001939	0.269306	5,780	610	2,040	42,100	1,290	3,640	2,170	8,450	ND U	49,700	ND U	913 J	2,050	15,400	13,100 B	33,900 B	27,800 B	3,820	ND U	24,700 B	15,500 B	ND U	ND U	7,930	3,660	46,700 B	47,800 B	24,000 B
Trap 6	Outside Duplicate	164,000	0.1640	0.000164			144 J	25.3 J	ND U	1,260 J	ND U	ND U	96.6 JK	326	ND U	1,480 J	ND U	243 J	254 JK	692 J	1,100 B	2,790 B	2,110 B	338 J	ND U	1,500 B	1,990 B	ND U	ND U	1,010	306 J	6,830 B	7,710 B	1,390 B
Trap 7	SB-79U-D - Indoor Air Duplicate	1,130,000	1.1300	0.001130			5,950	622	2,470	51,500	1,250	4,800	2,890	14,200	1,280 K	64,900	ND U	ND U	2,490	20,100	16,200 B	79,200 B	50,100 B	6,580	2,830	36,500 B	28,200 B	225 J	ND U	13,300	6,060	78,200 B	77,600 B	36,800 B
Trap 8	SB-79U-D Sub-slab Duplicate	5,020,000	5.0200	0.005020			3,860	4,290	6,060	186,000	3,330	2,990	1,590	9,020	ND U	41,200	ND U	2,520	4,770	19,300	105,000 B	454,000 B	216,000 B	26,800	ND U	144,000 B	165,000 B	ND U	ND U	30,000	12,800	313,000 B	327,000 B	67,600 B

Notes: Pumps were set at 5.0 LPM
7.2 cubic meters of air was pumped through the PUFs for a 24 hour period.
ND - Non-detect
U - Indicates the compound was analyzed and not detected.
J - Indicates an estimated value - used when the analyte concentrations is below the method reporting limit (MRL) and above the estimated detection limit (EDL).
K - EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a "K" flag. A "K" flag indicates an estimated maximum possible concentration for the associated compound.
B - Indicates the associated analyte is found in the method blank, as well as in the sample.
Bold values indicate analyte detected by laboratory.
Bold and shaded values indicate an exceedance of the USEPA Indoor Air/Sub-slab standards.

Table 1
PCB Congener Results
Indoor Air, Ambient Outdoor Air, and Sub-Slab Vapor Samples
Plant 4 - Former Cerro Plant

Sample Name	Sample Location	Total PCBs (picograms)	Total Micrograms	Total Milligrams	Total Milligrams of Duplicates	Total Micrograms/ Cubic Meter	PCB 22	PCB 36	PCB 39	PCB 38	PCB 35	PCB 37	PCB 54	PCBs 50 +53	PCBs 45 + 51	PCB 46	PCB 52	PCBs 43 + 73	PCBs 49 + 69	PCB 48	PCBs 44 + 47 + 65	PCBs 59 + 62 + 75	PCB 42	PCBs 41 + 71 + 40	PCB 64	PCB 72	PCB 68	PCB 57	PCB 58	PCB 67	PCB 63	PCBs 70 + 61 + 74 + 76	PCB 66
Trap 1	SB-80U-D Indoor Air	936,000	0.9360	0.000936		0.130000	19,700	ND U	ND U	ND U	ND U	8,200	346 J	10,500	13,000	4,360	44,100 B	1,650 J	22,900	9,950	37,900 B	3,110	10,700	21,800	15,800	ND U	ND U	385 J	ND U	614 J	978 J	38,500 B	18,100 B
Trap 2	Outside	378,000	0.3780	0.000378	0.000542	0.075278	5,390	ND U	173 J	ND U	704 J	3,110	146 J	5,290	6,940	2,420	33,300 B	1,180 J	19,100	8,050	34,000 B	2,800	9,270	20,700	16,800	113 J	37.6 JK	ND U	ND U	517 J	1,090 J	38,100 B	19,100 B
Trap 3	SB-79U-D Sub-slab	1,350,000	1.3500	0.001350	0.006370	0.884722	16,200	ND U	443 J	ND U	ND U	4,030	1,450 J	32,400	39,200	11,400	114,000 B	3,690	59,800	24,900	101,000 B	6,710	25,200	50,200	41,400	ND U	493 J	ND U	ND U	643 J	1,390 J	54,300 B	27,000 B
Trap 4	SB-80U-D Sub-slab	687,000	0.6870	0.000687		0.095417	4,850	ND U	176 JK	ND U	ND U	5,420	307 J	10,900	13,800	5,450	54,800 B	1,450 J	29,800	10,100	61,800 B	4,190	20,000	45,400	34,200	238 J	291 J	237 J	ND U	934 J	1,950 J	78,000 B	47,100 B
Trap 5	SB-79U-D - Indoor Air	809,000	0.8090	0.000809	0.001939	0.269306	16,100	ND U	ND U	ND U	95.2 J	7,440	312 J	8,850	11,600	4,200	45,100 B	1,750 J	25,600	12,000	45,900 B	3,810	13,900	29,500	21,700	126 J	53.9 J	136 J	ND U	717 J	1,150 J	44,600 B	21,800 B
Trap 6	Outside Duplicate	164,000	0.1640	0.000164			2,250	ND U	55.6 JK	ND U	156 JK	ND U	66.3 J	2,310	3,020	1,070	14,300 B	528 J	8,210	3,500	15,000 B	1,160	4,240	8,830	7,320	36.2 J	30.5 J	45.0 J	ND U	237 J	479 J	17,000 B	8,500 B
Trap 7	SB-79U-D - Indoor Air Duplicate	1,130,000	1.1300	0.001130			25,400	ND U	200 JK	ND U	201 J	10,100	408 J	14,800	17,700	6,310	64,000 B	2,400 J	33,800	15,600	56,600 B	4,540	47,800	31,000	21,800	119 J	83.9 J	136 JK	ND U	763 J	1,260 J	47,600 B	22,000 B
Trap 8	SB-79U-D Sub-slab Duplicate	5,020,000	5.0200	0.005020			63,500	ND U	2,140	ND U	ND U	15,700	4,040	144,000	163,000	48,000	535,000 B	14,700	264,000	96,700	404,000 B	22,700	95,400	169,000	149,000	656 J	1,150 J	508 J	ND U	1,850 J	4,110	184,000 B	94,200 B

Notes: Pumps were set at 5.0 LPM
7.2 cubic meters of air was pumped through the PUFs for a 24 hour period.
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Table 1
PCB Congener Results
Indoor Air, Ambient Outdoor Air, and Sub-Slab Vapor Samples
Plant 4 - Former Cerro Plant

Sample Name	Sample Location	Total PCBs (picograms)	Total Micrograms	Total Milligrams	Total Milligrams of Duplicates	Total Micrograms/ Cubic Meter	PCB 55	PCB 56	PCB 60	PCB 80	PCB 79	PCB 78	PCB 81	PCB 77	PCB 104	PCB 96	PCB 103	PCB 94	PCB 95	PCB 93 + 100	PCBs 98 + 102	PCBs 88 + 91	PCB 84	PCB 89	PCB 121	PCB 92	PCBs 90 + 101 + 113	PCBs 83 + 99	PCB 112	PCBs 86 + 87 + 97 + 109 + 119 + 125	PCB 117	PCBs 85 + 116
Trap 1	SB-80U-D Indoor Air	936,000	0.9360	0.000936		0.130000	ND U	8,080	5,150	ND U	115 J	ND U	44.6 J	798 J	ND U	382 J	104 J	174 J	12,100 B	248 J	965 J	2,920	5,280	406 J	ND U	2,190 BJ	11,700 B	8,240	ND U	9,270	590 J	1,710
Trap 2	Outside	378,000	0.3780	0.000378	0.000542	0.075278	ND U	7,200	4,940	ND U	68.0 JK	ND U	42.6 JK	702 J	ND U	445 J	141 J	209 J	10,500 B	347 J	1,110 J	3,090	4,340	503 J	ND U	1,540 BJ	7,730 B	6,330	ND U	6,690	ND U	1,840
Trap 3	SB-79U-D Sub-slab	1,350,000	1.3500	0.001350	0.006370	0.884722	ND U	8,460	5,380	ND U	117 J	ND U	ND U	368 J	ND U	1,710 J	347 J	528 J	23,400 B	837 J	2,560	6,530	8,440	946 J	ND U	2,140 BJ	9,500 B	7,670	ND U	7,010	463 J	1,600
Trap 4	SB-80U-D Sub-slab	687,000	0.6870	0.000687		0.095417	ND U	18,100	10,900	ND U	273 J	ND U	89.1 J	1,570 J	ND U	1,090 J	322 J	597 J	27,800 B	840 J	3,250	8,620	13,200	1,640 J	ND U	3,720 B	17,900 B	15,700	ND U	16,800	1,380	3,940
Trap 5	SB-79U-D - Indoor Air	809,000	0.8090	0.000809	0.001939	0.269306	ND U	8,370	5,390	ND U	116 J	ND U	50.2 J	762 J	ND U	582 J	170 J	262 J	15,600 B	426 J	1,300 J	3,910	6,030	585 J	ND U	2,150 BJ	10,700 B	7,170	ND U	8,640	755 J	1,820
Trap 6	Outside Duplicate	164,000	0.1640	0.000164			ND U	3,150	2,270 J	ND U	42.3 JK	ND U	ND U	315 J	ND U	188 J	52.1 JK	86.1 J	4,420 B	126 JK	492 J	1,310 J	1,870 J	243 J	ND U	648 BJ	3,320 BJ	2,670	ND U	2,860	201 JK	642 J
Trap 7	SB-79U-D - Indoor Air Duplicate	1,130,000	1.1300	0.001130			ND U	9,990	6,350	ND U	107 JK	ND U	74.0 J	1,000 J	ND U	631 J	155 J	253 J	16,500 B	410 J	1,330 J	3,990	6,380	557 J	ND U	2,550 B	13,700 B	9,120	ND U	10,800	ND U	2,760
Trap 8	SB-79U-D Sub-slab Duplicate	5,020,000	5.0200	0.005020			ND U	29,600	17,600	ND U	433 J	ND U	18.5 J	985 J	ND U	6,210	1,310 J	1,950 J	91,200 B	3,590	9,370	26,100	31,200	3,180	ND U	9,380 B	43,100 B	35,500	ND U	28,300	ND U	8,700

Notes: Pumps were set at 5.0 LPM
7.2 cubic meters of air was pumped through the PUFs for a 24 hour period.
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Table 1
PCB Congener Results
Indoor Air, Ambient Outdoor Air, and Sub-Slab Vapor Samples
Plant 4 - Former Cerro Plant

Sample Name	Sample Location	Total PCBs (picograms)	Total Micrograms	Total Milligrams	Total Milligrams of Dunlicates	Total Micrograms/ Cubic Meter	PCBs 110 + 115	PCB 82	PCB 111	PCB 120	PCBs 108 + 124	PCB 107	PCB 123	PCB 106	PCB 118	PCB 122	PCB 114	PCB 105	PCB 127	PCB 126	PCB 155	PCB 152	PCB 150	PCB 136	PCB 145	PCB 148	PCBs 135 + 151	PCB 154	PCB 144	PCBs 147 + 149	PCB 134
Trap 1	SB-80U-D Indoor Air	936,000	0.9360	0.000936		0.130000	11,600 B	1,650 J	ND U	ND U	298 J	527 J	145 J	ND U	7,920 B	96.6 J	259 J	2,920	ND U	ND U	ND U	10.4 JK	ND U	959 BJ	ND U	ND U	1,510 BJ	32.9 J	262 BJ	4,130 B	425 BJ
Trap 2	Outside	378,000	0.3780	0.000378	0.000542	0.075278	7,260 B	1,370 J	ND U	ND U	106 JK	266 J	85.9 JK	ND U	3,920 B	35.9 JK	191 J	1,660	ND U	ND U	ND U	ND U	ND U	280 BJ	ND U	ND U	455 BJ	ND U	78.8 BJ	967 BJ	93.3 BJ
Trap 3	SB-79U-D Sub-slab	1,350,000	1.3500	0.001350	0.006370	0.884722	6,730 B	1,290 J	ND U	ND U	70.8 J	145 J	47.5 JK	ND U	2,040 BJ	43.2 J	103 J	814 J	ND U	ND U	ND U	8.48 JK	7.46 J	375 JK	4.38 JK	ND U	397 BJ	11.7 J	49.7 BJ	644 BJ	70.5 BJ
Trap 4	SB-80U-D Sub-slab	687,000	0.6870	0.000687		0.095417	18,600 B	3,960	ND U	ND U	307 J	609 J	271 J	ND U	8,490 B	178 J	443 J	3,770	ND U	ND U	ND U	13.3 JK	14.0 JK	710 BJ	ND U	ND U	1,060 BJ	35.3 JK	159 BJ	2,000 BJ	220 BJ
Trap 5	SB-79U-D - Indoor Air	809,000	0.8090	0.000809	0.001939	0.269306	10,300 B	1,660 J	ND U	ND U	156 J	312 JK	102 JK	ND U	6,040 B	ND U	186 J	2,320	ND U	ND U	ND U	ND U	ND U	669 BJ	ND U	ND U	1,100 BJ	28.6 J	170 BJ	2,340 BJ	242 BJ
Trap 6	Outside Duplicate	164,000	0.1640	0.000164			3,090 BJ	595 J	ND U	ND U	53.0 J	125 J	50.2 J	ND U	1,740 BJ	25.5 J	71.0 JK	749 J	ND U	ND U	ND U	ND U	ND U	140 BJ	ND U	ND U	231 BJ	ND U	32.1 BJK	533 BJ	42.2 BJK
Trap 7	SB-79U-D - Indoor Air Duplicate	1,130,000	1.1300	0.001130			13,400 B	2,090 J	ND U	ND U	285 J	291 J	155 JK	ND U	8,320 B	104 J	280 J	3,200	ND U	ND U	ND U	7.58 JK	8.98 J	892 BJ	ND U	ND U	1,490 BJ	38.8 J	240 BJ	3,510 B	340 BJ
Trap 8	SB-79U-D Sub-slab Duplicate	5,020,000	5.0200	0.005020			26,500 B	4,730	ND U	ND U	277 J	514 J	197 JK	ND U	6,770 B	121 J	254 J	2,170	ND U	ND U	ND U	44.0 J	22.2 JK	1,650 B	11.8 JK	ND U	1,630 BJ	31.7 JK	197 BJ	2,470 BJ	229 BJ

Notes: Pumps were set at 5.0 LPM
7.2 cubic meters of air was pumped through the PUFs for a 24 hour period.
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Trap 1	SB-80U-D Indoor Air	936,000	0.9360	0.000936		0.130000	ND U	151 J	129 J	ND U	2,150 BJ	51.3 J	ND U	541 BJ	ND U	2,700 B	693 BJ	278 J	301 J	211 BJ	3,470 B	ND U	428 BJ	421 BJ	ND U	ND U	78.9 JK	293 BJ	ND U	ND U
Trap 2	Outside	378,000	0.3780	0.000378	0.000542	0.075278	ND U	35.3 J	25.8 J	ND U	459 BJ	ND U	ND U	143 BJ	ND U	740 BJ	247 BJ	75.0 JK	76.0 J	55.5 BJ	960 BJ	ND U	128 BJ	119 BJ	ND U	ND U	21.1 J	92.2 BJ	ND U	ND U
Trap 3	SB-79U-D Sub-slab	1,350,000	1.3500	0.001350	0.006370	0.884722	ND U	27.0 J	16.6 JK	ND U	244 BJ	ND U	ND U	62.9 BJ	ND U	281 BJ	93.3 BJ	20.8 JK	17.7 JK	22.4 BJ	344 BJ	ND U	35.6 BJ	41.2 BJK	ND U	ND U	ND U	26.9 BJ	ND U	ND U
Trap 4	SB-80U-D Sub-slab	687,000	0.6870	0.000687		0.095417	27.4 J	49.2 JK	58.7 J	ND U	946 BJ	12.6 JK	ND U	202 BJ	ND U	955 BJ	316 BJ	82.2 JK	96.3 J	52.9 BJ	1,100 BJ	ND U	138 BJ	114 BJK	ND U	ND U	21.6 JK	62.6 BJ	ND U	ND U
Trap 5	SB-79U-D - Indoor Air	809,000	0.8090	0.000809	0.001939	0.269306	21.8 JK	88.7 J	55.1 JK	ND U	1,210 BJ	29.0 J	ND U	317 BJ	ND U	1,710 BJ	504 BJ	190 J	169 J	117 BJ	2,250 BJ	ND U	303 BJ	319 BJ	ND U	ND U	66.9 J	206 BJ	ND U	ND U
Trap 6	Outside Duplicate	164,000	0.1640	0.000164			ND U	12.8 JK	ND U	ND U	249 BJK	ND U	ND U	79.1 BJ	ND U	394 BJ	131 BJ	41.2 J	36.0 J	29.2 BJ	470 BJ	ND U	61.6 BJ	60.7 BJK	ND U	ND U	13.2 JK	52.2 BJ	ND U	ND U
Trap 7	SB-79U-D - Indoor Air Duplicate	1,130,000	1.1300	0.001130			34.5 J	125 J	104 J	ND U	1,700 BJ	35.3 J	ND U	457 BJ	ND U	2,290 BJ	612 BJ	212 J	268 J	176 BJ	3,110 B	ND U	363 BJ	402 BJ	ND U	ND U	86.5 J	267 BJ	ND U	ND U
Trap 8	SB-79U-D Sub-slab Duplicate	5,020,000	5.0200	0.005020			22.0 J	96.9 J	66.1 J	ND U	860 BJ	ND U	ND U	186 BJ	ND U	837 BJ	194 BJ	57.5 J	72.3 J	47.0 BJ	796 BJ	ND U	82.4 BJ	79.8 BJ	ND U	ND U	ND U	37.1 BJ	ND U	ND U

Notes: Pumps were set at 5.0 LPM
7.2 cubic meters of air was pumped through the PUFs for a 24 hour period.
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U - Indicates the compound was analyzed and not detected.
J - Indicates an estimated value - used when the analyte concentrations is below the method reporting limit (MRL) and above the estimated detection limit (EDL).
K - EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a "K" flag. A "K" flag indicates an estimated maximum possible concentration for the associated compound.
B - Indicates the associated analyte is found in the method blank, as well as in the sample.
Bold values indicate analyte detected by laboratory.
Bold and shaded values indicate an exceedance of the USEPA Indoor Air/Sub-slab standards.

Table 1
PCB Congener Results
Indoor Air, Ambient Outdoor Air, and Sub-Slab Vapor Samples
Plant 4 - Former Cerro Plant

Sample Name	Sample Location	Total PCBs (picograms)	Total Micrograms	Total Milligrams	Total Milligrams of Duplicates	Total Micrograms/ Cubic Meter	PCB 179	PCB 184	PCB 176	PCB 186	PCB 178	PCB 175	PCB 187	PCB 182	PCB 183	PCB 185	PCB 174	PCB 177	PCB 181	PCBs 171 + 173	PCB 172	PCB 192	PCBs 180 + 193	PCB 191	PCB 170	PCB 190	PCB 189	PCB 202	PCB 201	PCB 204	PCB 197	PCB 200
Trap 1	SB-80U-D Indoor Air	936,000	0.9360	0.000936		0.130000	192 BJ	ND U	65.0 BJ	ND U	52.0 BJ	ND U	286 BJ	ND U	164 BJ	ND U	216 BJ	128 BJ	ND U	78.3 BJK	22.0 BJK	ND U	272 BJ	ND U	140 BJ	33.3 J	ND U	45.1 JK	18.5 JK	ND U	ND U	20.0 J
Trap 2	Outside	378,000	0.3780	0.000378	0.000542	0.075278	59.7 BJ	ND U	21.0 BJK	ND U	25.7 BJ	ND U	132 BJ	ND U	50.2 BJ	ND U	123 BJ	50.0 BJK	ND U	48.1 BJ	17.2 BJ	ND U	108 BJ	ND U	56.3 BJ	24.6 J	ND U	ND U	ND U	ND U	ND U	ND U
Trap 3	SB-79U-D Sub-slab	1,350,000	1.3500	0.001350	0.006370	0.884722	46.0 BJ	ND U	11.7 BJK	ND U	ND U	ND U	56.2 BJ	ND U	20.9 BJ	ND U	51.1 BJK	24.2 BJ	ND U	16.1 BJK	ND U	ND U	41.6 BJ	ND U	22.0 BJ	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trap 4	SB-80U-D Sub-slab	687,000	0.6870	0.000687		0.095417	133 BJ	ND U	37.1 BJ	ND U	34.9 BJ	ND U	135 BJ	ND U	55.5 BJ	ND U	104 BJ	47.1 BJ	ND U	23.3 BJK	ND U	ND U	72.1 BJ	ND U	26.4 BJ	ND U	ND U	21.7 J	ND U	ND U	ND U	8.82 JK
Trap 5	SB-79U-D - Indoor Air	809,000	0.8090	0.000809	0.001939	0.269306	125 BJK	ND U	41.9 BJ	ND U	37.0 BJ	ND U	241 BJ	ND U	100 BJ	ND U	169 BJ	74.2 BJ	ND U	62.5 BJ	ND U	ND U	136 BJ	ND U	60.9 BJ	19.5 JK	ND U	42.3 J	10.1 JK	ND U	ND U	10.6 JK
Trap 6	Outside Duplicate	164,000	0.1640	0.000164			39.7 BJ	ND U	ND U	ND U	ND U	ND U	75.9 BJ	ND U	27.1 BJK	ND U	78.8 BJK	47.6 BJ	ND U	ND U	ND U	68.5 BJ	ND U	33.2 BJ	9.25 JK	ND U	ND U	ND U	ND U	ND U	ND U	
Trap 7	SB-79U-D - Indoor Air Duplicate	1,130,000	1.1300	0.001130			182 BJ	ND U	57.9 BJ	ND U	56.7 BJ	ND U	317 BJ	ND U	177 BJ	ND U	247 BJ	115 BJK	ND U	83.4 BJ	27.1 BJ	ND U	252 BJ	ND U	94.6 BJ	26.4 JK	ND U	50.0 J	16.6 JK	ND U	ND U	21.0 J
Trap 8	SB-79U-D Sub-slab Duplicate	5,020,000	5.0200	0.005020			174 BJ	ND U	40.7 BJ	ND U	22.1 BJK	ND U	129 BJ	ND U	55.8 BJ	ND U	88.4 BJ	45.1 BJ	ND U	24.4 BJ	ND U	ND U	77.0 BJK	ND U	37.1 BJK	ND U	ND U	12.5 JK	ND U	ND U	ND U	ND U

Notes: Pumps were set at 5.0 LPM
7.2 cubic meters of air was pumped through the PUFs for a 24 hour period.
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U - Indicates the compound was analyzed and not detected.
J - Indicates an estimated value - used when the analyte concentrations is below the method reporting limit (MRL) and above the estimated detection limit (EDL).
K - EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a "K" flag. A "K" flag indicates an estimated maximum possible concentration for the associated compound.
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Bold values indicate analyte detected by laboratory.
Bold and shaded values indicate an exceedance of the USEPA Indoor Air/Sub-slab standards.

Table 1
PCB Congener Results
Indoor Air, Ambient Outdoor Air, and Sub-Slab Vapor Samples
Plant 4 - Former Cerro Plant

Sample Name	Sample Location	Total PCBs (picograms)	Total Micrograms	Total Milligrams	Total Milligrams of Duplicates	Total Micrograms/ Cubic Meter	PCBs 198 + 199	PCB 196	PCB 203	PCB 195	PCB 194	PCB 205	PCB 208	PCB 207	PCB 206	PCB 209	PCB 81	PCB 77	PCB 123	PCB 118	PCB 114	PCB 105	PCB 126	PCB 167	PCBs 156 + 157	PCB 169	PCB 189	Total PCBs
Trap 1	SB-80U-D Indoor Air	936,000	0.9360	0.000936		0.130000	82.3 BJK	24.7 BJK	39.1 BJK	22.6 BJ	118 BJK	ND U	15.8 JK	ND U	103 BJ	70.3 BJK	44.6	798	145	7,920	259	2,920	ND	78.9	293	ND	ND	936000
Trap 2	Outside	378,000	0.3780	0.000378	0.000542	0.075278	54.2 BJK	ND U	36.2 BJ	22.9 BJK	43.6 BJ	ND U	9.96 JK	ND U	ND U	62.3 BJ	42.6	702	85.9	3,920	191	1,660	ND	21.1	92.2	ND	ND	378000
Trap 3	SB-79U-D Sub-slab	1,350,000	1.3500	0.001350	0.006370	0.884722	ND U	ND U	ND U	ND U	21.8 BJ	ND U	ND U	ND U	ND U	22.0 BJ	ND	368	47.5	2,040	103	814	ND	ND	26.9	ND	ND	1350000
Trap 4	SB-80U-D Sub-slab	687,000	0.6870	0.000687		0.095417	35.5 BJ	14.0 BJK	25.0 BJ	14.1 BJK	22.7 BJ	ND U	ND U	ND U	ND U	ND U	89.1	1,570	271	8,490	443	3,770	ND	21.6	62.6	ND	ND	687000
Trap 5	SB-79U-D - Indoor Air	809,000	0.8090	0.000809	0.001939	0.269306	65.1 BJ	25.6 BJ	39.8 BJK	20.0 BJ	36.5 BJ	ND U	19.2 J	ND U	33.4 BJK	17.4 BJK	50.2	762	102	6,040	186	2,320	ND	66.9	206	ND	ND	809000
Trap 6	Outside Duplicate	164,000	0.1640	0.000164			29.2 BJ	ND U	ND U	ND U	19.4 BJK	ND U	ND U	ND U	ND U	25.0 BJK	ND	315	50.2	1,740	71.0	749	ND	13.2	52.2	ND	ND	164000
Trap 7	SB-79U-D - Indoor Air Duplicate	1,130,000	1.1300	0.001130			81.9 BJ	21.5 BJ	46.8 BJ	17.1 BJK	38.2 BJK	ND U	18.1 J	7.56 J	44.1 BJ	79.9 BJ	74.0	1,000	155	8,320	280	3,200	ND	86.5	267	ND	ND	1130000
Trap 8	SB-79U-D Sub-slab Duplicate	5,020,000	5.0200	0.005020			25.0 BJK	ND U	ND U	ND U	35.8 BJ	ND U	ND U	ND U	ND U	ND U	18.5	985	197	6,770	254	2,170	ND	ND	37.1	ND	ND	5020000

Notes: Pumps were set at 5.0 LPM
7.2 cubic meters of air was pumped through the PUFs for a 24 hour period.
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Bold values indicate analyte detected by laboratory.
Bold and shaded values indicate an exceedance of the USEPA Indoor Air/Sub-slab standards.

Table 2
PCB Congener Results
Indoor Air, Ambient Outdoor Air, and Sub-Slab Vapor Samples
Plant 4 - Former Cerro Plant

Sample Name	Sample Location	Total PCBs (picograms)	Total Micrograms	Total Milligrams	Total Micrograms/ Cubic Meter	PCB 189 (pg)	PCB 189 (ug/m3)	Totals of Duplicates PCB 189 (ug/m3)	PCB 167 (pg)	PCB 167 (ug/m3)	Totals of Duplicates PCB 167 (ug/m3)	PCBs 156 & 157 (pg)	PCB 157 and PCB 156 (ug/m3)	Totals of Duplicates PCB 157/156 (ug/m3)	PCB 169 (pg)	PCB 169 (ug/m3)	Totals of Duplicates PCB 169 (ug/m3)	PCB 123 (pg)	PCB 123 (ug/m3)	Totals of Duplicates PCB 123 (ug/m3)	PCB 118 (pg)	PCB 118 (ug/m3)	Totals of Duplicates PCB 118 (ug/m3)	PCB 105 (pg)	PCB 105 (ug/m3)	Totals of Duplicates PCB 105 (ug/m3)
Indoor Air Standard							0.11	0.11		0.11	0.11		0.11	0.11		0.0001	0.0001		0.11	0.11		0.11	0.11		0.11	0.11
Sub-slab Standard							1.1	1.1		1.1	1.1		1.1	1.1		0.001	0.001		1.1	1.1		1.1	1.1		1.1	1.1
Trap 1	SB-80U-D Indoor Air	936,000	0.9360	0.000936	0.130000	ND U	ND U		78.9 JK	0.000011		293	0.000041		ND	ND		145 J	0.000020		7,920 B	0.001100		2,920	0.000406	
Trap 2	Outside	378,000	0.3780	0.000378	0.052500	ND U	ND U	ND U	21.1 J	0.000003	0.000005	92.2	0.000013	0.000020	ND	ND	ND	85.9 JK	0.000012	0.000019	3,920 B	0.000544	0.000786	1,660	0.000231	0.000335
Trap 3	SB-79U-D Sub-slab	1,350,000	1.3500	0.001350	0.187500	ND U	ND U	ND U	ND U	ND	ND	26.9	0.000004	0.000009	ND	ND	ND	47.5 JK	0.000007	0.000034	2,040 BJ	0.000283	0.001224	814 J	0.000113	0.000414
Trap 4	SB-80U-D Sub-slab	687,000	0.6870	0.000687	0.095417	ND U	ND U		21.6 JK	0.000003		62.6	0.000009		ND	ND		271 J	0.000038		8,490 B	0.001179		3,770	0.000524	
Trap 5	SB-79U-D - Indoor Air	809,000	0.8090	0.000809	0.112361	ND U	ND U	ND U	66.9 J	0.000009	0.000021	206	0.000029	0.000066	ND	ND	ND	102 JK	0.000014	0.000036	6,040 B	0.000839	0.001994	2,320	0.000322	0.000767
Trap 6	Outside Duplicate	164,000	0.1640	0.000164	0.022778	ND U	ND U		13.2 JK	0.000002		52.2	0.000007		ND	ND		50.2 J	0.000007		1,740 BJ	0.000242		749 J	0.000104	
Trap 7	SB-79U-D - Indoor Air Duplicate	1,130,000	1.1300	0.001130	0.156944	ND U	ND U		86.5 J	0.000012		267	0.000037		ND	ND		155 JK	0.000022		8,320 B	0.001156		3,200	0.000444	
Trap 8	SB-79U-D Sub-slab Duplicate	5,020,000	5.0200	0.005020	0.697222	ND U	ND U		ND U	ND		37.1	0.000005		ND	ND		197 JK	0.000027		6,770 B	0.000940		2,170	0.000301	

Notes: Pumps were set at 5.0 LPM
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Table 2
PCB Congener Results
Indoor Air, Ambient Outdoor Air, and Sub-Slab Vapor Samples
Plant 4 - Former Cerro Plant

PCB 114 (pg)	PCB 114 (ug/m3)	Totals of Duplicates PCB 114 (ug/m3)	PCB 126 (pg)	PCB 126 (ug/m3)	Totals of Duplicates PCB 126 (ug/m3)	PCB 77 (pg)	PCB 77 (ug/m3)	Totals of Duplicates PCB 77 (ug/m3)	PCB 81 (pg)	PCB 81 (ug/m3)	Totals of Duplicates PCB 81 (ug/m3)
	0.11	0.11		0.000032	0.000032		0.032	0.032		0.11	0.11
	1.1	1.1		0.00032	0.00032		0.32	0.32		1.1	1.1
259 J	0.000036		ND U	ND		798 J	0.000111		44.6 J	0.000006	
191 J	0.000027	0.000036	ND U	ND	ND	702 J	0.000098	0.000141	42.6 JK	0.000006	0.000007
103 J	0.000014	0.000050	ND U	ND	ND	368 J	0.000051	0.000188	ND U	ND	ND
443 J	0.000062		ND U	ND		1,570 J	0.000218		89.1 J	0.000012	
186 J	0.000026	0.000065	ND U	ND	ND	762 J	0.000106	0.000245	50.2 J	0.000007	0.000017
71.0 JK	0.000010		ND U	ND		315 J	0.000044		ND U	ND	
280 J	0.000039		ND U	ND		1,000 J	0.000139		74.0 J	0.000010	
254 J	0.000035		ND U	ND		985 J	0.000137		18.5 J	0.000003	